

20th May 2021, 12:00-14:00 (GMT)

Session N°4:

Sustainable food systems: the key role of SMEs and businesses



INNOVATIONS
SERIES





Solar-powered cold storage for developing countries

designed to greatly reduce post-harvest loss for 470 million small farmers in Africa, Latin America, and Southeast Asia

INTRODUCTION

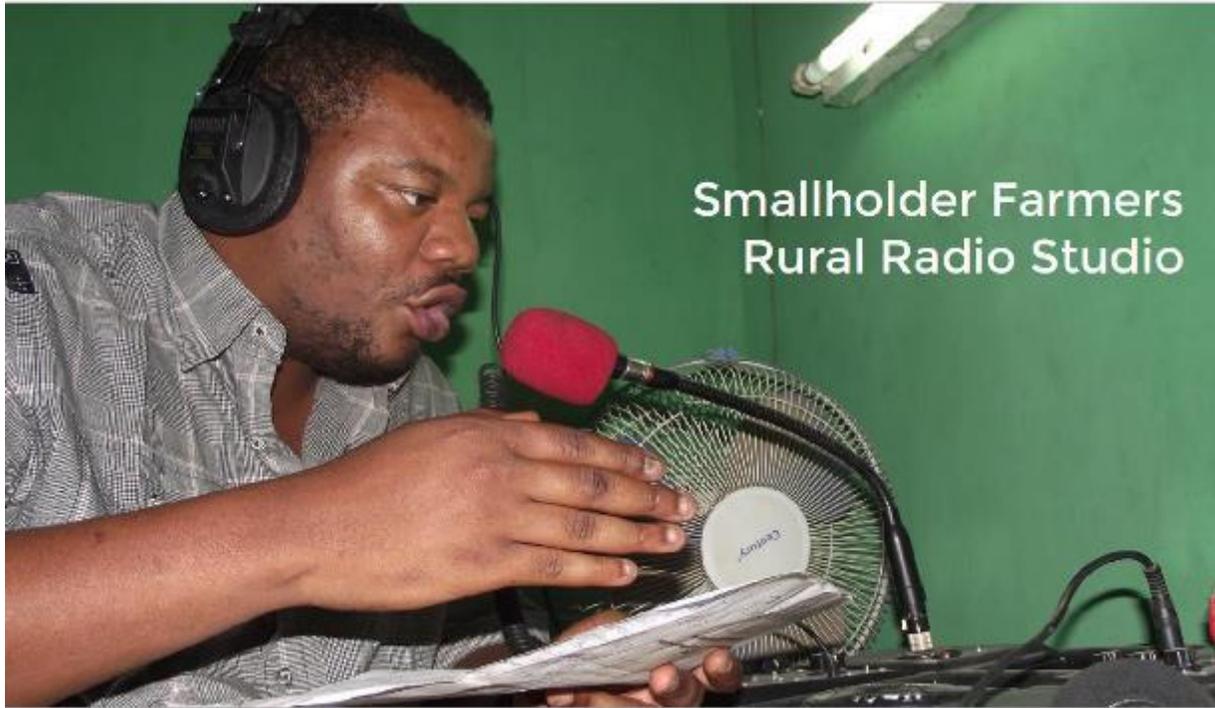
Nnaemeka C. Ikegwuonu

Farmer, innovator, leading social entrepreneur; Founder/CEO of the Smallholders Foundation Ltd./Gte (2003) – ColdHubs (2015)

Created Smallholder Farmer Rural Radio, The Agriprenuership Academy, The Smallholders Seed Store, Smallholders Microcredit, and GrainStore polypropylene bags (grain preservation bags).

Highly honored within the agricultural development space with more than 30 local and international awards - Ashoka Fellow 2008, Rolex Awards 2010, Fast Company's 100 Most Creative in Business 2012, Nigeria's Young Person of the Year 2011, Niigata International Food Prize Laureate, 2012 and 2013 Laureate of the Yara Prize for Green Revolution (Japan).





PROBLEM



In Nigeria, 45% of food spoils due to lack of cold storage...



...this causes 93 million small farmers to lose 25% of their annual income.

Source: Rockefeller Foundation; Food Waste and Spoilage Initiative 2014

Refrigeration can be used to extend shelf life but is non-existent in Nigerian farms clusters, aggregation centers and marketplaces.

X Most solutions are not rugged enough to withstand harsh conditions

X Power grids are not capable of delivering reliable energy

X Most equipment is too costly for the average farmer to purchase





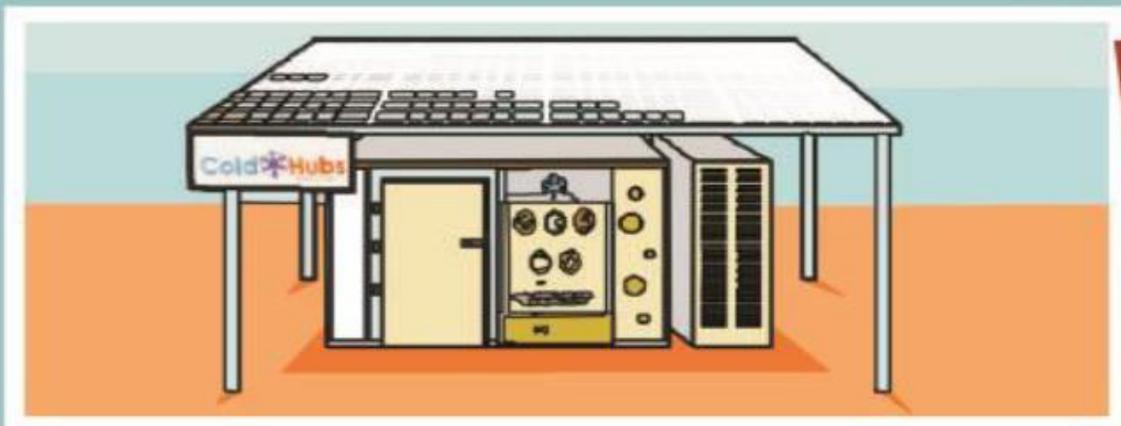
In 2015, we launched ColdHubs; 100% solar-powered walk-in cold stations for 24/7 storage and preservation.



Well designed for specific locations, weather conditions. R290 Refrigerant.

Cold*Hubs

**POSTHARVEST
EDUCATIONAL
MANAGEMENT (PHM)
COMIC**



**Educational Comic for
PostHarvest
Management Programme**

BY SMALLHOLDERS FOUNDATION & COLDHUBS

Offers education for post harvest management



Extends the shelf life of perishable food from 2 days to 21.



NGN 250/per 5kg of Ice block



Solar powered Ice blocks for cooling drinks; vaccines etc

REVENUE MODEL



**We charge up to 0.26 USD/night to rent 1 plastic 20kg crate of produce
1.32USD/night for meat & fish storage
Each station holds 150 crates - up to 75 – 198 USD/day in revenue**

OPERATIONS



VEGETABLES



FRUIT



MILK



FISH



MEAT

POWERED COLD STORAGE

Cold Hubs

SERVICE CHARGE LIST

A crate of tomato	N 50
Soft drinks	N 50
	N 50
	N 50
	N 25



Run by One Lady Hub Operators and One Lady Market Attendant per ColdHub.

4 YEAR IMPACT OF 54 HUBS



**42,024 tons of
fruits and
vegetables
saved
from spoilage**



**5,250 farmers,
retailers and
wholesalers have
increased their
income to US
\$120**



**66 jobs created
for women as Hub
Operators and
Market Attendants**



**1,040,688kg
tons of CO2
saved**

EXPANDING

Owns and operates 54
ColdHubs, across Nigeria

Projecting at least 100 new
ColdHubs and 20 IcePoints
by the end of 2020



THE TEAM



Bright Benjamin Igbokwe
COO

Experienced business development manager with extensive expertise in agribusiness startups, rural logistics, distribution, commercial strategy, contract negotiations, business processes, and team building.

Masters in Business Administration
Imo State University, Nigeria



Chidubem Maxwell
CTO

Electrical and electronics engineer, with extensive knowledge and expertise in clean energy, solar cells, batteries, air conditioning, cold room design, and refrigeration.

HND, Electrical & Electronics
Engineering, Federal Polytechnic
Nekede, Owerri, Nigeria



Terence Usibe
Finance and Admin

Experienced office and finance administrator managing our accounts within local and international standards.

HND in Accounting
Imo State Polytechnic Umuagwo

BOARD



CJ Uzoho
Commercial Manager Gas
Aggregation Company of
Nigeria

energy economist, business development expert with extensively knowledgeable and experience in energy related transactions.

Masters in Energy Economics
University of Dundee



Osayuki Eguasa
Financial Manager, All ON
Energy Impact Investors

economist with expertise in financial Planning / Forecasting , budgeting Budgetary Controls , Stakeholder Engagement and Corporate Finance.

BSc Accountancy,
University of Benin, Nigeria



David Ruben
Advisory Board

Consultant to The Rockefeller Foundation Food Initiative,

BSc in International Business (Copenhagen Business School), an LLM in Public International Law (Stockholm University), and an MSc in Foreign Service (Georgetown University).



World Food Programme



gain®
Global Alliance for Improved Nutrition

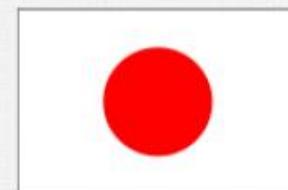


Swiss Re

FACTOR[e]
VENTURES



Energy innovations.
Powerful collaborations.



JAPAN GOV
THE GOVERNMENT OF JAPAN



GLOBAL COLD CHAIN
ALLIANCE®

ILK Dresden



Institut für Luft- und Kältetechnik
gemeinnützige Gesellschaft mbH



Microsoft

GLOBAL
CITIZEN®



B

KING BAUDOUIN
FOUNDATION



UKaid
from the British people



Department
for International
Development



USAID
FROM THE AMERICAN PEOPLE



Global
Maker
Challenge

Cold Hubs

nnaemeka@coldhubs.com

+234 806 0292346

www.coldhubs.com



*This series of events is organised by PAFO and COLEACP.
COLEACP operates within the framework of development cooperation
between the Organisation of African, Caribbean and Pacific States (OACPS)
and the European Union (European Development Fund – EDF), with the
support of the French Development Agency (AFD).*

Thank you

